

REACTION TIME IN HYPNOTISM.—Dr. G. Stanley Hall has made some observations upon this subject. He found that the time in the abnormal state was reduced from thirty-three to nineteen hundredths of a second.—*Mind*, April, 1883.

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EXPERIMENTAL PRODUCTION OF EPILEPSY.—Drs. Pitres and M. Frank relate the following experiment: One of the cerebral hemispheres in a dog is laid bare, and if the surface is irritated there are always produced epileptiform convulsions. Now, if before the irritation the cerebral surface is refrigerated by a spray of ether, then irritation of the cerebral surface will only cause movements, but no convulsions. If contact of the ether with the cerebral surface was prevented by a baudruche, still the cold was sufficient to prevent convulsions.—*Gazette des hôpitaux*, No. 38, 1883.

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GALVANIC IRRITATION OF THE AUDITORY NERVE.—Dr. Kiesselbach has made experiments upon himself, and arrived at the conclusion, that the tone generated by the galvanic current corresponds exactly to the resonance tone of the sound-conducting apparatus.—*Pflügers Archiv*, 1883. ISAAC OTT, M. D.

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#### b.—GENERAL PATHOLOGY OF THE NERVOUS SYSTEM.

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DIPHTHERITIC PARALYSIS.—Mr. Anthon Benson (Dublin) has given the following particulars of a case in a paper on paralysis of some of the ocular muscles after diphtheria (Ophthalmological Society of the United Kingdom). The patient was a girl aged eleven years. The primary throat affection was cured in four weeks. The ciliary muscles were affected in the fifth week, and continued so for about seven weeks. The soft palate was affected in the sixth, and remained so for about two weeks. The hearing was affected in the sixth week, and remained so for about a week. The levatores palpebrarum were affected in the ninth week, and continued so for about one week. The recti externi were affected in the ninth week, two days after the levatores palpebrarum, and remained so for about three weeks. The convergent strabismus and diplopia were present during the tenth week, and lasted for about four days. The weakness of the lower extremities began in the tenth week, and lasted for about three weeks. Numbness and tingling in the feet began about the tenth week, and lasted about the same time as the weakness, three weeks. He regarded paralysis of the ciliary muscle, without alteration of the condition of the iris, as the most frequent implication of the intrinsic muscles of the eye. The seat of the lesion was, he believed, in the brain and spinal cord. He combated Dr. Hughlings Jack-

son's sympathetic theory, on the grounds that the disease of the lenticular ganglion would be accompanied by some change in the action of the pupil. The portion of the nervous system, lesion in which would cause isolated bilateral paralysis of accommodation, was, he thought, Hensen and Voelcker's centre for accommodation in the hinder part of the floor of the third ventricle. The deafness, on which Dr. Jackson laid stress as confirmatory of his theory of disease of the ganglion, was, Mr. Benson thought, more likely to be the result of paresis of the palate with which it was accompanied, than of interference with the nervous supply of the tensor tympani muscle. Paresis of both levatores palpebrarum, and of both external recti muscles, as well as the frequent occurrence of paralysis in distant parts of the body and perverted sensation, all disproved the sympathetic hypothesis.

Post-mortem examination had shown in many cases numerous hemorrhages into the nervous centres, and in some cases a swollen condition of the large motor cells in the anterior cornua of the cord. Such changes, though they might occur in fatal cases, seemed unlikely to be the cause of paralysis, so fugitive and harmless as diphtheritic paralysis usually was. Mr. Benson thought that hemorrhages, larger or smaller, numerous or few, as the case might be, were a more probable cause. Hemorrhages had in several cases been found in diphtheritic paralysis. Hemorrhages might be of any size, and the symptom would be severe in proportion to the extent and position of the extravasation. Small hemorrhages might be absorbed with great rapidity, and have but little if any ill result; large hemorrhages would account for the hemiplegia and other grave forms which were met with at times.—*Brit. Med. Jour.*, No. 1159.

Dr. Hughlings Jackson has since stated (*Brit. Med. Jour.*, No. 1172, p. 1181) that he had been correctly reported to have said that this disease was owing to a morbid affection of the sympathetic system. What he ought to have said, all he really held, was that the ocular, the palatal, and the rarer circulatory symptoms (great slowness of the pulse) of this disease were morbid affections of parts supplied through the ganglia of the sympathetic. He believed the spinal cord, as well as higher parts of the nervous system, to be morbidly affected in the disease. He had not seen a case of so-called diphtherial amaurosis in a stage when the paralysis of the ciliary muscle was complete; in some cases, when accommodation was only weak, he thought the pupils acted well to light, whilst action of them during accommodation was at least imperfect.

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PERIODIC RECURRENT PARALYSIS OF OCULAR MUSCLES.—A remarkable case of paralysis of the ocular muscles, coming and going every month simultaneously with the appearance and disappearance of the catamenia, has been recorded by von Hasner (*Centralblatt f. klin. Med.*, No. 21). It occurred in a girl aged